EPA Comment #17 part 2(from EPA letter) and EPA Issue #14

EPA Comment #17: The SDEIS describes current site conditions, including the acreage, type, and quality of the wetland resources at the tailings basin and mine sites. The SDEIS also describes the proposed direct impacts remaining after measures to avoid or minimize direct impacts. However, the SDEIS does not quantitatively assess indirect impacts or measures to minimize and mitigate these impacts, except with respect to wetland losses due to fragmentation. The SDEIS also omits all indirect impacts from the cumulative impacts analysis for wetlands (Section 6.2.3.4).

> **Recommendation:** The FEIS should include indirect impacts in the analysis of cumulative impacts to wetlands.

EPA Comment #17 part 2 Response

It is difficult to predict indirect wetland effects within the CEAA, as well as to know what the potential indirect wetland effects would be for the projects assessed other than the NorthMet Project Proposed Action. However, based on the amount of potential indirect wetland effects that could occur from the NorthMet Proposed Action, there could be 0.1 to 11.3 percent cumulatively lost, in addition to the direct wetland impacts assessed, within the Partridge and Embarrass River watersheds as a result of the NorthMet Project Proposed Action.

The total wetland resources within the two watersheds during the time periods assessed are as follows:

- pre-settlement wetland resources - 68,251 acres;
- existing conditions wetland resources - 65,567 acres;
- foreseeable future conditions with the NorthMet Project Proposed Action and the other foreseeable projects assessed, which includes direct wetland impacts and future deepwater habitat - 64,979 acres; and
- foreseeable future conditions without the NorthMet Project Proposed Action but with the other foreseeable projects assessed, which includes direct wetland impacts and future deepwater habitat (No Action Alternative) - 65,292 acres.

Based on the wetlands crossing analog zones analysis approach, the acreage of wetlands whose hydrology would have a high likelihood of being affected by drawdown at the Mine Site is 866.9 acres. The wetlands categorized as high likelihood are dominated by one alder thicket (848 acres) that has approximately 4 acres (less than 1 percent) within the 0-1,000 ft analog impact zone. The remainder of this wetland (more than 99 percent) is located more than 1,000 ft away from the edge of the mine pits and extends out to the edge of Area 1 (see Figure 5.2.3-6 in the FEIS). Furthermore, based on this method, there would be 1,854.5 acres of wetlands within the 0-2,000 ft zone and 2,147.6 acres within the 0-3,500 ft zone that could be affected by potential drawdown. Based on this approach, the total projected potential indirect effects from all six factors that were assessed under this method could be up to 7,694.2 acres of wetlands potentially indirectly affected by the NorthMet Project Proposed Action. Therefore, the potential indirect cumulative effect from the NorthMet Project Proposed Action, in addition to the direct wetland impacts assessed, under this method would range between 1.3 to 12.0 percent.

Based on the method approach of wetlands within analog zones, the acreage of wetlands whose hydrology would have a high likelihood of being affected by drawdown at the Mine Site is 46.4 acres. Furthermore, based on this method, there would be 348.4 acres of wetlands within the 0-2,000 ft zone and 733.3 acres within the 0-3,500 ft zone that could be affected by potential drawdown. Based on this approach, the total projected potential indirect effects from all six factors that were assessed under this method could be up to 6,568.8 acres of wetlands potentially indirectly affected by the NorthMet Project Proposed Action. Therefore, the potential indirect cumulative effect from the NorthMet Project Proposed Action, in addition to the direct wetland impacts assessed, under this method would range between 0.1 to 10.2 percent.